

(ii) Aircraft deicing/anti-icing procedures, including inspection and check procedures and responsibilities.

(iii) Communications procedures.

(iv) Aircraft surface contamination (i.e., adherence of frost, ice, or snow) and critical area identification, and how contamination adversely affects aircraft performance and flight characteristics.

(v) Types and characteristics of deicing/anti-icing fluids.

(vi) Cold weather preflight inspection procedures;

(vii) Techniques for recognizing contamination on the aircraft.

(3) The certificate holder's holdover timetables and the procedures for the use of these tables by the certificate holder's personnel. Holdover time is the estimated time deicing/anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the protected surfaces of an aircraft. Holdover time begins when the final application of deicing/anti-icing fluid commences and expires when the deicing/anti-icing fluid applied to the aircraft loses its effectiveness. The holdover times must be supported by data acceptable to the Administrator. The certificate holder's program must include procedures for flight crewmembers to increase or decrease the determined holdover time in changing conditions. The program must provide that takeoff after exceeding any maximum holdover time in the certificate holder's holdover timetable is permitted only when at least one of the following conditions exists:

(i) A pretakeoff contamination check, as defined in paragraph (c)(4) of this section, determines that the wings, control surfaces, and other critical surfaces, as defined in the certificate holder's program, are free of frost, ice, or snow.

(ii) It is otherwise determined by an alternate procedure approved by the Administrator in accordance with the certificate holder's approved program that the wings, control surfaces, and other critical surfaces, as defined in the certificate holder's program, are free of frost, ice, or snow.

(iii) The wings, control surfaces, and other critical surfaces are redeiced and a new holdover time is determined.

(4) Aircraft deicing/anti-icing procedures and responsibilities, pretakeoff check procedures and responsibilities, and pretakeoff contamination check procedures and responsibilities. A pretakeoff check is a check of the aircraft's wings or representative aircraft surfaces for frost, ice, or snow within the aircraft's holdover time. A pretakeoff contamination check is a check to make sure the wings, control surfaces, and other critical surfaces, as defined in the certificate holder's program, are free of frost, ice, and snow. It must be conducted within five minutes prior to beginning take off. This check must be accomplished from outside the aircraft unless the program specifies otherwise.

(d) A certificate holder may continue to operate under this section without a program as required in paragraph (c) of this section, if it includes in its operations specifications a requirement that, any time conditions are such that frost, ice, or snow may reasonably be expected to adhere to the aircraft, no aircraft will take off unless it has been checked to ensure that the wings, control surfaces, and other critical surfaces are free of frost, ice, and snow. The check must occur within five minutes prior to beginning takeoff. This check must be accomplished from outside the aircraft.

[Doc. No. 6258, 29 FR 19222, Dec. 31, 1964, as amended by Amdt. 121-231, 57 FR 44942, Sept. 29, 1992; Amdt. 121-253, 61 FR 2615, Jan. 26, 1996]

**§ 121.631 Original dispatch or flight release, redispach or amendment of dispatch or flight release.**

(a) A certificate holder may specify any regular, provisional, or refueling airport, authorized for the type of aircraft, as a destination for the purpose of original dispatch or release.

(b) No person may allow a flight to continue to an airport to which it has been dispatched or released unless the weather conditions at an alternate airport that was specified in the dispatch or flight release are forecast to be at or above the alternate minimums specified in the operations specifications for that airport at the time the aircraft would arrive at the alternate airport. However, the dispatch or flight release

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may be amended en route to include any alternate airport that is within the fuel range of the aircraft as specified in §§121.639 through 121.647.

(c) No person may allow a flight to continue beyond the ETOPS Entry Point unless—

(1) Except as provided in paragraph (d) of this section, the weather conditions at each ETOPS Alternate Airport required by §121.624 are forecast to be at or above the operating minima for that airport in the certificate holder's operations specifications when it might be used (from the earliest to the latest possible landing time); and

(2) All ETOPS Alternate Airports within the authorized ETOPS maximum diversion time are reviewed and the flight crew advised of any changes in conditions that have occurred since dispatch.

(d) If paragraph (c)(1) of this section cannot be met for a specific airport, the dispatch or flight release may be amended to add an ETOPS Alternate Airport within the maximum ETOPS diversion time that could be authorized for that flight with weather conditions at or above operating minima.

(e) Before the ETOPS Entry Point, the pilot in command for a supplemental operator or a dispatcher for a flag operator must use company communications to update the flight plan if needed because of a re-evaluation of aircraft system capabilities.

(f) No person may change an original destination or alternate airport that is specified in the original dispatch or flight release to another airport while the aircraft is en route unless the other airport is authorized for that type of aircraft and the appropriate requirements of §§121.593 through 121.661 and 121.173 are met at the time of redispach or amendment of the flight release.

(g) Each person who amends a dispatch or flight release en route shall record that amendment.

[Doc. No. 628, 29 FR 19222, Dec. 31, 1964, as amended by Amdt. 121-65, 35 FR 12709, Aug. 11, 1970; Amdt. 121-329, 72 FR 1881, Jan. 16, 2007]

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### § 121.633 Considering time-limited systems in planning ETOPS alternates.

(a) For ETOPS up to and including 180 minutes, no person may list an airport as an ETOPS Alternate Airport in a dispatch or flight release if the time needed to fly to that airport (at the approved one-engine inoperative cruise speed under standard conditions in still air) would exceed the approved time for the airplane's most limiting ETOPS Significant System (including the airplane's most limiting fire suppression system time for those cargo and baggage compartments required by regulation to have fire-suppression systems) minus 15 minutes.

(b) For ETOPS beyond 180 minutes, no person may list an airport as an ETOPS Alternate Airport in a dispatch or flight release if the time needed to fly to that airport:

(1) at the all engine operating cruise speed, corrected for wind and temperature, exceeds the airplane's most limiting fire suppression system time minus 15 minutes for those cargo and baggage compartments required by regulation to have fire suppression systems (except as provided in paragraph (c) of this section), or

(2) at the one-engine-inoperative cruise speed, corrected for wind and temperature, exceeds the airplane's most limiting ETOPS Significant System time (other than the airplane's most limiting fire suppression system time minus 15 minutes for those cargo and baggage compartments required by regulation to have fire-suppression systems).

(c) For turbine-engine powered airplanes with more than two engines, the certificate holder need not meet paragraph (b)(1) of this section until February 15, 2013.

[Doc. No. FAA-2002-6717, 72 FR 1882, Jan. 16, 2007]

### § 121.635 Dispatch to and from refueling or provisional airports: Domestic and flag operations.

No person may dispatch an airplane to or from a refueling or provisional airport except in accordance with the requirements of this part applicable to